

THE FORMER BAKER AND COMPANY SITE  
Engelhard Industries  
Newark, New Jersey

Site Function

Correspondence dated February 1943 identifies Baker and Company, Inc. as a source for assay and production of pure iridium metal for the MED. By early 1945, Baker had completed or was providing support to MED under at least five contracts (W-7407-eng-1,4,6,15 and 22) with the New York Operations Office. Two contracts were in support of the X-10 Project, two in support of Special Use Projects and one in support of the P-9 (Heavy Water) Project. No records have been discovered that identify the type and scope of work done in support of X-10 or Special Use Projects. Most of the information assembled pertains to the recovery of platinum from spent catalyst or reactivation of catalyst for use at the Trail production facilities in Canada in the manufacture of heavy water during the period 1943 through 1950. At least 62,000 pounds of spent catalyst (platinized granular carbon) were processed during the period. License records from 1957 also indicate that a 20' x 20' structure was used by Baker in the recovery of platinum from contaminated scrap for the AEC. The records indicate the material was contaminated with polonium or plutonium and that the facility was not reviewed as part of the AEC License.

Records also indicate that Baker and Company was issued AEC Source Material License No. C-3387 on August 8, 1955, to receive possession of and title to not more than 50 pounds of depleted uranium metal for use in experiments on the rolling, drawing, and fabrication of uranium, and on the preparation of sample and experimental clad fuel elements. In October 1957 the license was extended to include 500 pounds of refined source material for similar purposes plus development of processing, purification and recovery procedures. In February 1958, the license was amended to include up to 20,000 pounds of refined source material in the form of scrap or contaminated material for recovery of the source material, and 500 grams of normal uranium for use as a spectrographic sample in the determination of recovery product purity. The licensee is identified as Engelhard Industries, Inc., Baker Platinum Division. The license expiration date identified in the 1958 amendment was July 31, 1962.

The amendments to the license issued in 1957 and 1958 included license to transfer and deliver possession of and title to refined source material to any person licensed by the Atomic Energy Commission, within the limits of his license.

The AEC's 1958 report to the Congress identifies Engelhard's Baker Platinum Division as one of five companies licensed to reclaim unirradiated enriched uranium from scrap generated in fuel fabrication and fuel material preparation. The report also identifies Engelhard's D.E. Makepeace Division in Plainville, Massachusetts, as one of 13 companies licensed to fabricate nuclear reactor fuel elements in their own facilities for private reactor and Government research, testing and power reactors.

B/170

No records have been discovered that indicate use of the licensed material was in support of or under contract with AEC.

#### Site Description

The location of Baker and Company facilities, identified on correspondence assembled from the period February 1943 through February 1958, was 113 Astor Street, Newark, New Jersey. The facility at 113 Astor Street was identified as a laboratory.

#### Owner History

Formal documentation to define ownership history is not on file. Baker and Company, later identified as the Baker Platinum Division of Engelhard Industries, occupied and probably owned the facilities on Astor and Delancey Streets. It is apparent that Engelhard was successor to the Baker and Company properties. The property at 113 Astor Street was sold. Current owner is unknown. There are indications that the refining facility on Delancey Street is still owned by Engelhard Industries.

#### Radiological History and Status

No documents have been found that might indicate the radiological history of the Baker facilities during or after completion of contracts for extraction of platinum from spent catalyst or the reactivation of catalyst used in the production of heavy water.

The attached AEC letter to Dr. E. Rosenblatt, subject: Precautions for Platinum Processing, dated February 18, 1949, and the internal memorandum from P. Fields to L. K. Hurst, subject: Radioactivity in Decontaminated Platinum, dated March 24, 1949, indicate potential for contamination but do not provide information necessary to identify the residues or byproducts of concern. However, license records indicated that the contaminants were polonium or plutonium. They further indicate the work was done in a 20' x 20' building at the same facility where the licensed activities were being conducted (presumably 113 Astor Street).

License records document safety inspections and radiological conditions relating to those facilities involved in Uranium processing. These structures and associated property are or were under the jurisdiction of the Nuclear Regulatory Commission. Only the building used for platinum recovery remains of possible concern to DOE under FUSRAP.